IN THE UNITED STATES PATENT AND TRADEMARK OFFICE:
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPLICANTS:	Schneur et al.		
APPL. NO.:	10/081,411	ART UNIT:	3627
FILING DATE:	February 20, 2002	EXAMINER:	Shaawat, Mussa
TITLE:	AUCTION MANAGEMENT WITH BUSINESS VOLUME DISCOUNT		

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P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Please charge the fee associated with a four month extension of time and the fee specified in 37 C.F.R. §1.17(f) to Deposit Account No. 07-1700. The Commissioner is hereby authorized to charge any additional required fees to Deposit Account No. 07-1700.

REAL PARTY IN INTEREST

The real party in interest is the owner of the present application, Emptoris, Inc.

RELATED APPEALS AND INTERFERENCES

No other appeals or interferences directly affect or will be directly affected by the Board's decision in the present appeal.

STATUS OF CLAIMS

The application as filed contained 14 claims, and in an amendment filed on October 20, 2006, we added claims 15–20. Claims 1–20 remain pending, have been rejected, and are the subject of this appeal.

STATUS OF AMENDMENTS

No amendments have been filed subsequent to the Office Action mailed on February 26, 2007.

SUMMARY OF CLAIMED SUBJECT MATTER

A buyer opens a conventional reverse auction by distributing a "request-for-quotation" ("RFQ") to prospective suppliers. The RFQ contains a list of the items the buyer would like to purchase. In some cases, the RFQ contains additional information pertinent to the proposed transaction, such as minimum or maximum quantities, delivery dates, or standards of quality.

In response to the RFQ, prospective suppliers submit bids. The buyer then chooses which of those suppliers are to be awarded the bid. The optimal combination of suppliers,

together with the list of items to be ordered from each supplier, is referred to as an "optimal award schedule."

Were price the sole concern, the buyer would simply select the supplier offering the lowest price per item. The present invention, however, is directed toward complex transactions involving non-price considerations. For example, a supplier's price for an item can be made to depend on the quantity of that item purchased. Or, the supplier may give one price for a bundle of disparate items, in which case it is unclear how to allocate this price among the items.

In addition, the invention permits other, less clearly quantifiable factors to be considered. For example, the buyer's purchase decision may turn on the quality of goods or the reputation of the supplier for reliability, or the supplier's solvency. The buyer may also have internally generated policies, or business rules, that further constrain which suppliers can be awarded a bid.

Independent claim 1 of the present invention is directed to a computer-implemented method for determining an optimal award schedule for satisfying a purchase requisition.[1] A plurality of bids are received over a computer network from each of a corresponding plurality of candidate suppliers.[2] An explicit offer of a business-volume discount is received over the computer network from a candidate supplier,[3] the discount being triggered when a purchase from the candidate supplier of at least one unit of a first qualifying item and at least one unit of a second qualifying item has an aggregated volume within a defined volume interval.[4] Utilizing the explicit offer of a business volume discount,[5] a processor determines an optimal award

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[1]   Specification at pg. 3, ln. 10–11.
[2]   Specification at pg. 3, ln. 15–16.
[3]   Specification at pg. 3, ln. 17–19.
[4]   Specification at pg. 3, ln. 19–21.
[5]   Specification at pg. 29, ln. 12–pg. 30, ln. 9.

schedule[6] comprising an optimal combination of suppliers and a list of items to be ordered from

each supplier to at least partially satisfy the purchase requisition.[7]

Independent claim 8 is directed toward a computer-readable media having encoded

thereon software for satisfying a purchase requisition.[8] This claim is substantively similar to

claim 1.

GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

The issues on appeal are: (1) whether claims 1–20 are unpatentable under 35 U.S.C.

§ 103(a) over U.S. Patent Application Publication No. 2003/0033236 to Davenport et al.

("*Davenport*") in view of U.S. Patent Application Publication No. 2003/0088494 to Lee ("*Lee*").

ARGUMENT

A.   *The Rejection Over* Davenport *and* Lee
        Fail to Consider Essential Elements of the Claims

The burden is on the Examiner to demonstrate that each and every feature of a claim is

met by a single reference or by a valid combination of references. Courts have repeatedly and

consistently held that "all limitations [of a claim] must be considered ... and it is error to ignore

specific limitations in distinguishing over the references."[9] In the present case, the Examiner has

failed to consider two essential elements of independent claims 1 and 8 in rejecting those claims

over *Davenport* in view of *Lee*.

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[6]   Specification at pg. 4, ln. 4–5; .
[7]   Specification at pg. 2, ln. 5–6.
[8]   Specification at pg. 8, ln. 7–12.
[9]   *In re Boe and Duke*, 184 USPQ 38, 40 (CCPA 1974).

Specifically, independent claims 1 and 8 both recite, in part: (1) receiving, from a candidate supplier, "an <u>explicit</u> offer of a <u>business-volume discount</u> that is triggered when a purchase from the candidate supplier of <u>at least one unit of a first qualifying item and at least one unit of a second qualifying item has an aggregated volume within a defined volume interval,</u>" and (2) a processor determining "<u>an optimal award schedule</u> comprising an optimal combination of suppliers and a list of items to be ordered from each supplier to at least partially satisfy the purchase requisition <u>utilizing the explicit offer of a business volume discount</u>" (emphasis added). For the reasons that follow, we respectfully submit that neither *Davenport* nor *Lee* teaches nor suggests: (1) an explicit offer of a business-volume discount conditioned on the aggregated volume of a plurality of items, and (2) a processor that determines an optimal award schedule of suppliers and the items to be ordered from each supplier utilizing the offered business volume discount.

Davenport

In *Davenport*, potential suppliers in a procurement auction bid on items or combinations of items requested by a potential buyer.[10] The bids are subsequently taken from a database and placed into an array representation suitable for solution by a commercial linear programming/integer programming (LP/IP) solver.[11] The result is a solution to the "winner determination" problem that includes a set of bids such that each item is included in at least one winning bid.[12] The system can structure the solution to limit the minimum and maximum

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[10]   *Davenport* at para. 36.
[11]   *Davenport* at para. 40.
[12]   *Davenport* at para. 36.

number of winning suppliers, the minimum and maximum total quantity allocated to each

supplier, and the reservation prices on each lot.[13]

In contrast to the claimed invention, *Davenport* fails to teach or suggest any mechanism

that allows a potential supplier to explicitly specify a business volume discount associated with a

bid. Instead, *Davenport* discloses a system where potential suppliers implicitly adjust their bid

pricing to account for a volume discount:

> This particular instance was generated randomly. For each supplier, a set of lots
> the supplier was interested in was generated, and a set of bids for different subsets
> of this set were also generated. <u>A single bundled bid for a set of lots S would be
> for a lower price than that of the sum of the prices of any set of bids by the same
> supplier, which also, in total, covers all the lots in S.</u>[14]

(emphasis added). Moreover, since *Davenport* does not allow suppliers to explicitly specify a

business volume discount, *Davenport* cannot generate an optimal award schedule using specified

business volume discounts.

Such a limited, primitive system is simply not relevant to the present claims. Indeed,

Davenport, like other references cited during prosecution, typifies the prior art over which the

present invention improves. *Davenport* does not allow prospective suppliers to explicitly offer

discounts conditioned on the aggregated volume of multiple items purchased and *Davenport*

neither teaches nor enables the processor-based determination of an optimal award schedule

using such offered business-volume discounts. Thus, *Davenport* fails to satisfy at least two

essential elements of the claims highlighted above.

The statements concerning *Davenport* made in the outstanding Office Action are

incorrect. Paragraphs 64–73 do not teach "an explicit offer of a business volume discount that is

triggered when purchase from the candidate supplier at least one unit of a first qualifying item

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[13]   *Davenport* at para. 68–70.

and a second qualifying item has an aggregated volume within a defined volume interval."[15]

Paragraphs 64–66 on their face discuss certain assumptions made concerning the items that the

procurer wishes to buy. Paragraphs 67–73 discuss side constraints imposed on the auction,

specifically constraints concerning the number of suppliers, the quantities allocated to suppliers,

and the reservation prices on each lot.

Finally, the Office Action on its face concedes that *Davenport* fails to satisfy the

determination of an optimal award schedule.[16] For this reason alone, the present claims are

allowable, as the *Lee* reference does not cure this admitted deficiency.

Lee

Lee fails to cure the deficiencies of *Davenport*. In some ways, *Lee* is even less relevant

to the claimed invention than *Davenport*. *Lee* concerns a "system and method for market makers

of electronic marketplaces to provide RFQ processes over a network."[17] While *Davenport* at

least teaches automated solutions to the RFQ problem, *Lee* requires the buyer to manually

evaluate the submitted sell bids "to select ones that meet the buyer's need best." [18]

If *Lee* teaches the manual evaluation of submitted bids, then it teaches away from and

does not enable a processor determining an optimal award schedule. The Office Action does not

claim that *Lee* teaches an explicit offer of a business volume discount conditioned on the

aggregated volume of a plurality of items.[19] Thus, *Lee* fails to satisfy at least two essential

elements of the claims highlighted above.

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[14]   *Davenport* at para. 75.
[15]   Office Action at 3 (errors in original).
[16]   Office Action at 3.
[17]   *Lee* at para. 9.
[18]   *Lee* at para. 31. See also para. 30, 32.

The rejection of independent claims 1 and 8 is based on *Davenport* in view of *Lee*, and the preceding discussion demonstrates how *Davenport* and *Lee*, either by themselves or in combination, fail to teach or suggest at least two essential elements of these claims. For these reasons, we respectfully submit that the rejection of independent claims 1 and 8 over *Davenport* in view of *Lee* is clear error. The remaining claims, which depend therefrom, are therefore allowable as well.

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[19]   Office Action at 3–4.

CONCLUSION

For all of the foregoing reasons, we submit that the Examiner's rejection of claims 1–20 were erroneous, and reversal thereof is respectfully requested.

Respectfully submitted,

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CLAIMS APPENDIX

1.   A computer-implemented method for determining an optimal award schedule for satisfying a purchase requisition, the method comprising:

>   receiving over a computer network, from each of a plurality of candidate suppliers, a corresponding plurality of bids;

>   receiving, from a candidate supplier over said computer network, an explicit offer of a business-volume discount that is triggered when a purchase from the candidate supplier of at least one unit of a first qualifying item and at least one unit of a second qualifying item has an aggregated volume within a defined volume interval; and

>   determining by a processor an optimal award schedule comprising an optimal combination of suppliers and a list of items to be ordered from each supplier to at least partially satisfy the purchase requisition utilizing the explicit offer of a business volume discount.

2.   The method of claim 1, wherein receiving a business-volume discount offer comprises receiving a business-volume discount offer in which a business-volume discount is triggered on the basis of purchases of items belonging a first category of items and no business-volume discount is triggered on the basis of purchases of items belonging to a second category of items.

3.   The method of claim 2, wherein receiving a corresponding plurality of bids comprises receiving, from the at least one candidate supplier, a first bid in which each item recited in the first bid belongs to no more that one item-category.

4.   The method of claim 2, wherein receiving a corresponding plurality of bids comprises receiving, from the at least one candidate supplier, a first bid in which at least one item recited in the first bid belongs to both a first item-category and a second item-category.

5.   The method of claim 4, wherein determining an optimal award schedule comprises constraining the optimal award schedule such that a purchase of the at least one qualifying item contributes to a business volume discount associated with at most one of the first and second item-categories.

6.   The method of claim 1, wherein receiving an offer of a business-volume discount comprises receiving a business-volume discount offer that defines a plurality of volume intervals, each of the volume intervals being associated with a corresponding discount to be offered when the volume of an aggregate purchase of at least two qualifying items from the at least one candidate supplier is within the volume interval.

7.   The method of claim 1, wherein receiving an offer of a business-volume discount comprises receiving a business-volume discount offer in which the defined volume interval has a lower bound defined by a volume threshold and no upper bound.

8.   A computer-readable medium having encoded thereon software for satisfying a purchase requisition, the software comprising instructions for:

receiving, from each of a plurality of candidate suppliers, a corresponding plurality of bids;

receiving, from a candidate supplier, an explicit offer of a business-volume discount that is triggered when a purchase from the candidate supplier of at least one unit of a first

qualifying item and at least one unit of a second qualifying item has an aggregated

volume within a defined volume interval; and

determining by a processor an optimal award schedule comprising an optimal

combination of suppliers and a list of items to be ordered from each supplier to at

least partially satisfy the purchase requisition utilizing the explicit offer of a business

volume discount.

9.   The computer-readable medium of claim 8, wherein the instructions for receiving a

business-volume discount offer comprise instructions for receiving a business-volume discount

offer in which a business-volume discount is triggered on the basis of purchases of items

belonging a first category of items and no business-volume discount is triggered on the basis of

purchases of items belonging to a second category of items.

10.   The computer-readable medium of claim 9, wherein the instructions for receiving a

corresponding plurality of bids comprise instructions for receiving, from the at least one

candidate supplier, a first bid in which each item recited in the first bid belongs to no more than

one item-category.

11.   The computer-readable medium of claim 9, wherein the instructions for receiving a

corresponding plurality of bids comprise instructions for receiving, from the at least one

candidate supplier, a first bid in which at least one item recited in the first bid belongs to both a

first item-category and a second item-category.

12.   The computer-readable medium of claim 11, wherein the instructions for determining an

optimal award schedule comprise instructions for constraining the optimal award schedule such

that a purchase of the at least one qualifying item contributes to a business volume discount associated with at most one of the first and second item-categories.

13.   The computer-readable medium of claim 8. wherein the instructions for receiving an offer of a business-volume discount comprise instructions for receiving a business-volume discount offer that defines a plurality of volume intervals, each of the volume intervals being associated with a corresponding discount to be offered when the volume of an aggregate purchase of at least qualifying two items from the at least one candidate supplier is within the volume interval.

14.   The computer-readable medium of claim 8, wherein the instructions for receiving an offer of a business-volume discount comprise instructions for receiving a business-volume discount offer in which the defined volume interval has a lower bound defined by a volume threshold and no upper bound.

15.   The method of claim 1 further comprising imposing, by a party other than a candidate supplier, a private buyer constraint prior to determining the optimal award schedule.

16.   The method of claim 15 further comprising changing an imposed private buyer constraint and redetermining the optimal award schedule using the changed private buyer constraint.

17.   The method of claim 1 further comprising storing a supplier profile corresponding to a candidate supplier.

18.   The method of claim 17 wherein determining an optimal award schedule considers a stored supplier profile corresponding to a candidate supplier.

19.   The computer-readable medium of claim 8 further comprising instructions for imposing, by a party other than a candidate supplier, a private buyer constraint prior to determining the optimal award schedule.

20.   The computer-readable medium of claim 8 further comprising instructions for storing a supplier profile corresponding to a candidate supplier.

<u>EVIDENCE APPENDIX</u>

There has been no evidence submitted under 37 C.F.R. §§ 1.130–32 in this case.

<u>RELATED PROCEEDINGS APPENDIX</u>

There have been no proceedings related to this case.